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09/492,521	01/27/2000	Hisao Hayashi	KN-43-US	9984

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EXAMINER
WORKU, NEGUSSIE

ART UNIT	PAPER NUMBER
2624	7

DATE MAILED: 06/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/492,521	HAYASHI, HISAO	
	Examiner	Art Unit	
	Negussie Worku	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *3/18/04* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,8-12,14-18 and 20-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *21-23* is/are allowed.

6)☒ Claim(s) *1-6,8-12,14-18 and 20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

JEROME GRANT II
PRIMARY EXAMINER

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. Applicant's arguments with respect to claims 1-6, 8-12, 14-18 and 20, have been considered but are moot in view of the new ground(s) of rejection. This office action is non-final.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> *(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.*

3. Claim 1, is rejected under 35 U.S.C. 103(a) as being unpatentable over Umemoto (USP 5,013,916) in view of Kojima et al. (USP 5,422,208).

With respect to claim 1, Umemoto et al. discloses an image scanner (a reading section 20 as shown in fig 1), for use in reading image information, (sheet 2 of fig 1), comprising: a driving said conveying roll means (conveyer 101 of fig 3), for conveying a manuscript (2 of fig 1), including said image information to be read on a predetermined reading position of a conveying route (path 1 of fig 1, see col.8, line 15-20); a first light source (111 of fig 3) which is located at one side of said conveying route (101 of fig 3) and which emits light onto said predetermined reading position from said one side, see (col.4, lines 57-58); a second light source (113 of fig 3)

which is located at another side of said conveying route with being opposite to said first light source (111 of fig 3) and which emits light onto said predetermined reading position from said another side opposite to said one side, see col.12, lines 65-68); image information reading means (reading section 20 of fig 1), see col.8, lines 22-25), for reading said image information included in said manuscript (2 of fig 1), at said predetermined reading position (the reading section 20 of fig 1, the predetermined reading position), said conveying route (path 1, the route 2 conveyed by conveying means 50 of fig 1); light electricity conversion means (107 of fig 3, see col.12, lines 35-37); said first and said second light sources, (111, 113 of fig 3), to read said image information included in said manuscript, (sheet 2 of fig 1), is defined by a reflected light reflected by said manuscript (2 of fig 1).

Umemoto et al. does not disclose a light source switching control means for controlling first light and the second light source.

Kojima et al. in the same area a light source switching control means (18 of fig 1) for controlling the first (light source 13 of fig 1), and the second light source, (15 of fig 1, controlling at least one of the two light sources, see col.5, lines 25-30), is adapted to perform controlling the light that illuminated on the document from first and the second light source, see col.5, lines 25-30.

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified an image reading and recording apparatus of Umemoto

et al. to include: light source control means is adapted to perform controlling the light that illuminate on the document from first and the second light source.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified the image reading and recording system of Unemoto by the teaching of Kojima because of the following reason stated below: It would have provided users a method that includes a means for controlling at least one of the two light source in a manner that the light sources is illuminated in a ratio of amount of light in the rang of user's perception.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 2-6, 8-12, are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai (USP 5,677,777) in view of Arai et al. (USP 6,335,982).

With respect to claim 2 and 8, Tsai discloses an image scanner (204 as shown in fig 2) for use in reading image information, (scanning original sheet, see col.1, lines 7-10), comprising: a driving side conveying roll (2052 of fig 2, see col.3, lines 12-13), for conveying a manuscript (original document), including said image information to be read past a stationary reading

position (tray 2032 a stationary reading position); a driven side conveying roll (314 of fig 3, see col.3, line 36-38), which is located above said driving side conveying roll, see col.3, lines 23) and which rotates by rolling contact with said driving side conveying roll (315 of fig 3); driving side conveying roll (315 of fig 3) and said driven side conveying roll (314 of fig 3); conveying roll driving means ("Motor" see col.3, line 54-56), for starting a rotation of said driving side conveying roll (315 of fig 3) light-electricity conversion means (24 of fig 2, see col.3, lines 4-6), for carrying out light-electricity conversion of said image information per one line in a main-scanning direction of said manuscript from a side of one surface of said manuscript at a reading position on a conveying route when said driving side conveying roll is started to rotate by said conveying roll driving means (315 of fig 3, see (col.3, line 54-55), and said manuscript is thereby started to move toward the sub-scanning direction between said driving side and said driven side conveying rolls, see col.3, lines 53-56), said reading position existing downstream of said conveying route from the rolling-contact position by a predetermined distance, see (col.3, lines 55-58); a first light source (2021 of fig 2) for emitting light onto said reading position from a side of another surface of said manuscript opposite to said one surface thereof; a second light source (2022 of fig 2), for emitting light onto said reading position from a side of the same surface of said manuscript as said one surface thereof, see (col.3, line 22-23); and light source switching control means (selecting device, see col.2, line 47) for selectively rendering either said first light source (2021 of fig 2) or said second light source (2022 of fig 2), ON to read said image information included in said manuscript dependent on whether said image information is

defined by a reflected light reflected by said manuscript or by a transmitting light transmitting through said manuscript, see (col.2, lines 44-53).

Tsai does not disclose a manuscript sensor for detecting said manuscript when a head of said manuscript arrives at a position near the rolling-contact position.

However, Arai et al. discloses a manuscript sensor (sensor 7 of fig 1, detect sheet 2 of fig 1), for detecting said manuscript (sheet 2 of fig 1) when a head of said manuscript arrives at a position for scanning.

Since, Tsai and Arai both are directed to same filed of endeavor, namely image scanning and paper detecting or sensing apparatus. The purpose of having a manuscript or document sensor for detecting of a manuscript when a head of said manuscript is arrives at a position for scanning could have been recognized by Tsai as set forth by Arai et al.

It would have been obvious to insert sensor 7 of fig 1, of Arai et al. In front of document tray 203 of fig 2, and close to the surface of the sheet for the purpose of detecting or sensing the position of sheet if the sheet is in position to be read by scanner the reason for doing so is for saving time and energy that scanner waste in case the reader run out of sheet on the platen or feed tray.

With respect to claims 3 and 9, Tsai discloses an image scanner (as shown in fig 2), further comprising an upper housing unit (a housing where light source 2021 is positioned, see fig 2), in which said driven side conveying roll, (315 of fig 3) said second

light source (2022 of fig 2), and said light electricity conversion means (204 of fig 2) are contained, and a lower housing unit (a lower housing where light source 2022 is positioned as a lower housing, see fig 2) in which said driving side conveying roll (315 of fig 3) and said first light source (2021 of fig 2) are contained, said upper housing unit (103 of fig 1) being separated from said lower housing unit, (111 of fig 1) wherein said upper housing unit is capable of reading image information independently.

With respect to claims 4 and 10, Tsai discloses an image scanner (as shown in fig 2), wherein a lower electric component (102 of fig 1) included in said lower housing unit (111 of fig 1) is controlled by an upper electric component included in said upper housing unit, (103 of fig 1) and wherein said upper and said lower housing units are connected by an attachable and removable connector with each other.

With respect to claim 5 and 11, Tsai discloses an image scanner (as shown in fig 2), further comprising an upper housing unit (103 of fig 1) in which said driven side conveying roll, (2051 of fig 2) aid second light source, (2021 and 201 of fig 2) and said light electricity conversion means (313 of fig 3), are contained and a plurality of mirrors (207, 208 of fig 2) located between said light-electricity conversion means (311 of fig 3) and said reading position, wherein a light path is turned by each of said a plurality of mirrors there between, see (col.3, lines 40-45).

With respect to claims 6 and 12, Tsai discloses every limitation of the claim except an encoder which generates a pulse every time said driven side conveying roll makes a predetermined number of rotations.

However, Arai et al. discloses an encoder (21 of fig 1), which generates a pulse every time said driven side conveying roll makes a predetermined number of rotations, see (col.4, lines 17-20).

Tsai and Arai both are directed to same filed of endeavor, namely image processing and document inspecting apparatus. The purpose of having a manuscript or document sensor for detecting of a manuscript when a head of said manuscript is arrives at a position for scanning could have been recognized by Tsai as set forth by Arai et al.

It would have been obvious to insert sensor 7 of fig 1, of Arai et al. In front of document tray 203 of fig 2, and close to the surface of the sheet for the purpose of detecting or sensing the position of sheet if the sheet is in position to be read by scanner. The reason for doing so is for saving time and energy that scanner waste in case the reader run out of sheet on the platen or feed tray.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

7. Claims 14-17 and 20, are rejected under 35 U.S.C. 102(b) as being anticipated by Tsai (USP 5,677,777).

With respect to claim 14, Tsai discloses an image scanner (204 as shown in fig 2) for use in reading image information, (scanning original sheet, see col.1, lines 7-10), comprising: a driving side conveying roll (2052 of fig 2, see col.3, lines 12-13), for conveying a manuscript (original document), including said image information to be read past a stationary reading position (tray 2032 a stationary reading position); a driven side conveying roll (314 of fig 3, see col.3, line 36-38), which is located above said driving side conveying roll, see col.3, lines 23), and which rotates by rolling contact with said driving side conveying roll (315 of fig 3); driving side conveying roll (315 of fig 3) and said driven side conveying roll (314 of fig 3); conveying roll driving means ("Motor" see col.3, line 54-56), for starting a rotation of said driving side conveying roll (315 of fig 3), light-electricity conversion means (24 of fig 2, see col.3, lines 4-6), for carrying out light-electricity conversion of said image information per one line in a main-scanning direction of said manuscript from a side of one surface of said manuscript at a reading position on a conveying route when said driving side conveying roll is started to rotate by said conveying roll driving means (315 of fig 3, see (col.3, line 54-55), and said manuscript is thereby started to move toward the sub-scanning direction between said driving side and said driven side conveying rolls, see col.3, lines 53-56), said reading position existing downstream of said conveying route from the rolling-contact position by a predetermined distance, see (col.3, lines 55-58); a first light source (2021 of fig 2) for emitting light onto said reading position from

a side of another surface of said manuscript opposite to said one surface thereof; a second light source (2022 of fig 2), for emitting light onto said reading position from a side of the same surface of said manuscript as said one surface thereof, see(col.3, line 22-23); and manuscript type Judging means (selective device, software or hardware, see col.2, lines 52-54, and control the manuscript type, see (col.2, lines 45-50), which respectively renders said first and said second light source (2033 and 2021 of fig 2, see col.2, lines 45-50), exclusively ON on a condition that said manuscript is existing at said reading position to compare respective signal levels after convert by said light-electricity convert means (204 of fig 2, see col.3, lines 27-30), and which there by Judge whether said manuscript is such a type of manuscript as read by a transmitting light transmitting through said manuscript or such another type of manuscript as read by a reelected light reelected by said manuscript (document positioned on platen 2032 of fig 2); and light source switching control means (selecting device, see col.2, line 47) for selectively rendering either said first light source (2021 of fig 2) or said second light source (2022 of fig 2), ON to read said image information included in said manuscript, (document positioned on 2032 of fig 2), dependent on whether said image information is defined by a reflected light reflected by said manuscript or by a transmitting light transmitting through said manuscript, see (col.2, lines 44-53).

With respect to claim 15, Tsai discloses an image scanner (as shown in fig 2), further comprising an upper housing unit (a housing where light source 2021 is positioned, see fig 2), in which said driven side conveying roll, (315 of fig 3) said second light source (2022 of fig 2), and

said light electricity conversion means (204 of fig 2) are contained, and a lower housing unit (a lower housing where light source 2022 is positioned as a lower housing, see fig 2) in which said driving side conveying roll (315 of fig 3) and said first light source (2021 of fig 2) are contained, said upper housing unit (103 of fig 1) being separated from said lower housing unit, (111 of fig 1) wherein said upper housing unit is capable of reading image information independently.

With respect to claim 16, Tsai discloses an image scanner (as shown in fig 2), wherein a lower electric component (102 of fig 1) included in said lower housing unit (111 of fig 1) is controlled by an upper electric component included in said upper housing unit, (103 of fig 1) and wherein said upper and said lower housing units are connected by an attachable and removable connector with each other.

With respect to claim 17, Tsai discloses an image scanner (as shown in fig 2), further comprising an upper housing unit (103 of fig 1) in which said driven side conveying roll, (2051 of fig 2) aid second light source, (2021 and 201 of fig 2) and said light electricity conversion means (313 of fig 3), are contained and a plurality of mirrors (207, 208 of fig 2) located between said light-electricity conversion means (311 of fig 3) and said reading position, wherein a light path is turned by each of said a plurality of mirrors there between, see (col.3, lines 40-45)

With respect to claim 20, Tsai discloses an image scanner (as shown in fig 2), wherein said image scanner, (204 of fig 2) after said manuscript type judging means (sensor 204 of fig 2) have judged whether said manuscript is such a type of manuscript as read by a transmitting light transmitting through said manuscript (transmissive document) or such an another type of manuscript as read by a reflected light reflected by said manuscript, (refractive document) reversibly moves the manuscript until a head of the manuscript reaches said reading position (2033 of fig 2), and then starts conveying the manuscript in said sub-scanning direction to read the manuscript.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claim 18, is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai (USP 5,677,777) in view of Arai et al. (USP 6,335,982).

With respect to claim 18, Tsai discloses every limitation of the claim except an encoder which generates a pulse every time said driven side conveying roll makes a predetermined number of rotations.

However, Arai et al. discloses an encoder (21 of fig 1), which generates a pulse every time said driven side conveying roll makes a predetermined number of rotations, see (col.4, lines 17-20).

Tsai and Arai both are directed to same filed of endeavor, namely image processing and document inspecting apparatus. The purpose of having a manuscript or document sensor for detecting of a manuscript when a head of said manuscript is arrives at a position for scanning could have been recognized by Tsai as set forth by Arai et al.

It would have been obvious to insert sensor 7 of fig 1, of Arai et al. In front of document tray 203 of fig 2, and close to the surface of the sheet for the purpose of detecting or sensing the position of sheet if the sheet is in position to be read by scanner. The reason for doing so is for saving time and energy that scanner waste in case the reader run out of sheet on the platen or feed tray.

Allowable Subject Matter

10. The following is a statement of reasons for the indication of allowable subject matter: Claims 21-23, are allowed.

With respect to claim 21, the prior art does not show or disclose wherein said reading of said image information being started from the time when said pulse is generated, said reading of said image information being terminated when a predetermined time has passed after said pulse is stopped.

With respect to claim 22, the prior art does not show or disclose wherein said reading of said image information being started from the time when said pulse is generated, said reading of said image information being terminated when a predetermined time has passed after said pulse is stopped.

With respect to claim 23, the prior art does not show or disclose wherein said reading of said image information being started from the time when said pulse is generated, said reading of said image information being terminated when a predetermined time has passed after said pulse is stopped.

Response to the Arguments

11. Applicant's response filed March 18, 2003, have been respectfully considered and reviewed. With respect to clam 1, the rejection of the last office action have been withdrawn and a new ground of rejection has been submitted. With respect to applicant's response to claims 2-6, 8-12, 14-18 and 20, applicant's arguments believe to be unpersuasive for the reasons stated below: In all paragraph of page 13, applicant argues that the "references would not have been combined because the reference are directed to different area".

However, examiner disagree because the two combined references are in the same are of image scanning, paper detecting and sensing apparatus, and are not as applicant alleges toward the floppy diskette drive of the computer area. Therefore, the motivation and the purpose of

combining the two reference as stated in the office, for the purpose of saving time and energy that scanner waste in case the reader run out of sheet on the platen or feed tray.

Furthermore, with respect to claims 2 and 8, at page 14, 3rd paragraph applicant argues that the reference does not teach "manuscript that conveys the manuscript pass a stationary reading position" and and in claim 14, "manuscript type Judging means".

The manuscript that conveys the manuscript pass a stationary reading position is disclosed by Tsai, as seen from fig 2, as the sheet is positioned on the document tray 2032, it moves in and out of the housing 201, to be on the position to be read by reader 204 of fig 2, so that the document tray convey or moves the manuscript pass a stationary reading postion as discussed in col.3, lines 15-25.

With respect to claim 14, applicant argues that "manuscript type Judging means" not taught by reference. Examiner disagree because Tsai discloses manuscript type Judging means , as discussed see col.2, lines 45-55, that selection means determine the type of manuscript to be read a reflective or a transmissive document by a software or a hardware that implemented on the system, see col.2, lines 5-55.

12. Any inquiry concerning this communication or earlier communication from Examiner should be directed to Negus Worku whose telephone number is (703) 305 5441.

The Examiner can normally be reached on M-F, 9 am - 6 pm if attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, David Moore, can be reached on (703) 308-7452.

The fax phone number for the organization where this application or proceeding is assigned is (703) 306-5406, and any inquiry of general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

05/ 22/ 03

JEROME GRANT II
PRIMARY EXAMINER